Improve Science Student Teachers’ Attitudes toward English for Science Teacher by Using Peer Instruction at Suan Sunandha Rajabhat University, Thailand

Oral presentation at New Perspectives in Science Education International Conference, Florence, Italy March 16-17, 2017

Sumalee Tientongdee, Ed.D. (Science Education)
Faculty of Education, Suan Sunandha Rajabhat University
Bangkok, Thailand
email: sumalee.ti@ssru.ac.th
Introduction

Rajabhat University Community (38 universities) → Suan Sunandha Rajabhat University
Introduction

ASEAN community

ASEAN Member Countries
University goal on students’ aspects

Three aspects of students
• Academics education
• Skills and internship
• Good personality

Science Student Teacher

Everybody can communicate in English

Peer Instruction

Science student teachers have higher attitudes toward English
Research questions

1. Was there any difference in science student teachers’ attitudes between before and after learning through Peer Instruction (PI) at Suan Sunandha Rajabhat University (SSRU), Thailand?

2. What were science student teachers’ opinions about using PI in English for Science Teacher class at SSRU, Thailand?
Peer Instruction

Instrucción entre Pares

1. breve presentación
2. prueba conceptual
3. encuesta 1 con clicker
   - < 30% correcto
     - revisar el concepto
   - 30-70% correcto
     - discusión entre pares
   - > 70% correcto
     - explicación
4. encuesta 2 con clicker
5. repetir desde el inicio

**Peer Instruction Model by Eric Mazur**
Peer Instruction at SSRU

Just in Time teaching → Classroom activities → Self/Peer assessment

- group
- paired
- Individual
Methodology

• Participants

Participants in this study, who were conveniently sampled, were 46 third year students in science teaching major studying at Suan Sunandha Rajabhat University, Bangkok, Thailand. There were 9 males and 37 females taking English for Science Teacher I and II as required elective courses in second semester of 2015 and first semester of 2016.

• Instruments

The design was quasi-experimental design for collecting quantitative data. It was one group pre-test and post-test by using a questionnaire to investigate students’ attitudes. The focus group interview was used to collect the qualitative data by asking students’ opinions about PI after they had learned through the class.

• Research Process

• Data Analysis

In data analysis IBM SPSS Statistics version 20.0 was used to analyze quantitative data, students’ attitude scores. Students’ opinions about PI were analyzed by using content analysis.
Test | N  | Mean | Standard Deviation | t   | P   |
---|-----|------|--------------------|-----|-----|
pre-test | 46  | 3.06 | 0.70               | 14.78 | .00* |
post-test | 46  | 4.41 | 0.40               |      |     |

**Q1: Students’ anxiety in English and how can PI help?**

The majority of students stated that they were shy to participate in English class. 5% of students indicated that they felt nervous while speaking English. However, all of them agreed that PI helped them to feel more confident to speak English and less shy. They felt very positive to English class while the instructor was teaching by PI.

**Q2: Students’ desire to learn English and to learn in PI class**

100% of students stated that they wanted to learn English as much as they could. They strongly agreed that if they could speak English very well, they could have more opportunity to work outside the country as a science teacher. 90% of them thought that PI was very useful for them to learn in English class and they wanted to apply this pedagogy to their own class in the future.
The findings of this study presented that although the participants perceived pre-test on their attitudes scores as fair, they perceived their scores very high for the post-test. The participants were generally found that use PI pedagogy in their English class was very helpful to improve their attitude toward English for a science teacher. Their opinions about PI were very positive.
Recommendations for future study

- This study should be expanded the number of participants and the duration time for the study.
- Peer Instruction may be modified based on the nature of subjects and learning style of students.
- Other active learning activities should be added up to make English lessons more interesting.